I claim:

1. In an electricity meter, a method for compensating for measurement errors of an external transformer coupled to a power line, the electricity meter operable to measure electricity consumption on the power line, the method comprising:

a) obtaining at least one error rating for the external transformer;

b) storing data representative of the at least one error rating in a memory within the meter;

c) coupling the electricity meter to the external transformer;

d) employing the meter to obtain at least one electricity consumption measurement value, the at least one electricity consumption value comprising either a sampled current value or a sampled voltage value; and

e) causing the meter to adjust the at least one electricity consumption measurement value using at least a portion of the stored data.

2. The method of claim 1 wherein the at least one error rating is obtained from written indicia associated with the external transformer.

3. The method of claim 1 wherein:

step a) further comprises obtaining at least one error rating comprising a ratio error rating for the external transformer

step d) further comprises employing the meter to obtain at least one electricity consumption measurement value comprising a sampled current value; and

step e) further comprises causing the meter to adjust the sampled current value using the stored data representative of the ratio error rating.

4. The method of claim 1 wherein:

step a) further comprises obtaining at least one error rating comprising a phase error rating for the external transformer; and

step e) further comprises causing the meter to adjust at least one electricity consumption measurement using the stored data representative of the phase error.

5. The method of claim 1 wherein step d) further comprises causing the meter to adjust the at least one electricity consumption measurement value by multiplying the at least one electricity consumption measurement value by a compensation factor.

6. The method of claim 1 wherein step e) further comprises causing the meter to adjust the at least one electricity consumption measurement value by multiplying the at least one electricity consumption measurement value by a dynamic compensation factor.

7. The method of claim 1 wherein step e) further comprises causing the meter to adjust the at least one electricity consumption measurement value by multiplying the at least one electricity consumption measurement value by a dynamic compensation factor, the dynamic compensation factor varying with respect to an average electricity consumption measurement value.

8. The method of claim 1 wherein step d) further comprises employing the meter to obtain at least one sampled current value and wherein step e) further comprises causing the meter to multiply the at least one sampled current value by a ratio compensation factor that is a function of the stored data representative of a ratio error rating and an average current measurement value.

9. The method of claim 1 wherein step d) further comprises employing the meter to obtain at least one sampled current value and wherein step e) further comprises causing the meter to multiply the at least one sampled current value by a ratio compensation factor that is a function of the stored data representative of a ratio error rating and an rms current measurement value.

10. The method of claim 1 wherein step e) further comprises causing the meter to adjust the at least one electricity consumption measurement value by, in part, multiplying a phase shifted electricity consumption measurement value by a compensation factor.

11. The method of claim 10 wherein step e) further comprises causing the meter to adjust the at least one electricity consumption measurement value by, in part, multiplying the phase shifted electricity consumption measurement value by a dynamic compensation factor, the dynamic compensation factor varying with respect to an average electricity consumption measurement value.

12. The method of claim 10 wherein step e) further comprises causing the meter to multiply the phase shifted electricity consumption measurement value by a phase compensation factor that is a function of the stored data representative of a phase error rating and an average current measurement value.

13. The method of claim 10 wherein step e) further comprises causing the meter to multiply the phase shifted electricity consumption measurement value by the compensation factor, the compensation factor having an inverse relationship to an average current measurement value.

14. The method of claim 8 wherein step d) further comprises employing the meter to obtain at least one sampled current value and wherein step e) further comprises causing the meter to multiply the at least one sampled current value by the compensation factor, the compensation factor having an inverse relationship to an average current measurement value.

15. The method of claim 1 wherein step a) further comprises obtaining at least one error rating comprising a ratio error rating and a phase error rating for the external transformer.

16. An apparatus for use in an electricity meter, the electricity operably coupled through an external transformer to measure electricity consumption on a power line; the apparatus operable to compensate for measurement errors of an external transformer, the apparatus comprising:

a) a memory storing data representative of at least one error rating for the external transformer;

b) a processing circuit operable to

obtain at least one electricity consumption measurement value, the at least one electricity consumption measurement value comprising either a sampled current value or a sampled voltage value, and

adjust the at least one electricity consumption measurement value using at least a portion of the stored data.

17. The apparatus of claim 16 wherein the processing circuit is further operable to:

obtain at least one error rating comprising a ratio error rating for the external transformer;

obtain at least one electricity consumption measurement value comprising a sampled current value; and

adjust the sampled current value using the stored data representative of the ratio error rating.

18. The apparatus of claim 16 wherein the processing circuit is further operable to:

obtain at least one error rating comprising a phase error rating for the external transformer; and

adjust at least one electricity consumption measurement value using the stored data representative of the phase error.

19. The apparatus of claim 16 wherein the processing circuit is further operable to adjust the at least one electricity consumption measurement value by multiplying either the at least one electricity consumption measurement value or a phase shifted electricity compensation measurement value by a dynamic compensation factor.

20. The apparatus of claim 19 wherein the processing circuit is further operable to adjust the at least one electricity consumption measurement value by multiplying either the at least one electricity consumption measurement value or the phase shifted electricity consumption measurement value by the dynamic compensation factor, the dynamic compensation factor varying with respect to an average electricity consumption measurement value.

21. The apparatus of claim 20 wherein the dynamic compensation value varies in an inverse relationship with respect to the average electricity consumption measurement value.

22. The apparatus of claim 20 wherein the processing circuit is further operable to:

obtain at least one sampled current value; and

multiply the at least one sampled current value using a ratio correction factor that is a function of the stored data representative of a ratio error rating and an average current measurement value.

23. The apparatus of claim 20 wherein the processing circuit is further operable to:

multiply the phase shifted electricity consumption measurement value using a phase correction factor that is a function of the stored data representative of the phase error rating and an average current measurement value to produce a phase shift value;

adding the phase shift value to the at least one sampled current value.

24. The apparatus of claim 20 wherein the processing circuit is further operable to:

obtain at least one sampled current value; and

adjust dynamically the at least one sampled current value using a correction factor that has an inverse relationship to an average current measurement value.

25. The apparatus of claim 16 wherein the processing circuit includes a digital signal processor.

26. The apparatus of claim 16 wherein the memory includes an EEPROM.

27. In an electricity meter, a method for compensating for measurement errors of an external transformer coupled to a power line, the electricity meter operable to measure electricity consumption on the power line, the method comprising:

a) obtaining at least one error rating for the external transformer;

b) storing data representative of the at least one error rating in a memory within the meter;

c) coupling the electricity meter to the external transformer;

d) employing the meter to obtain at least one electricity consumption measurement value;

e) causing the meter to multiply either the at least one electricity consumption measurement value or a phase shifted electricity consumption measurement value by a dynamic compensation factor.

28. The method of claim 27 wherein step e) further comprises causing the meter to multiply either the at least one electricity consumption measurement value or a phase shifted electricity compensation measurement value by the dynamic compensation factor, the dynamic compensation factor varying with respect to an average electricity consumption measurement value.

29. The method of claim 27 wherein step d) further comprises employing the meter to obtain at least one sampled current value and wherein step e) further comprises causing the meter to multiply the at least one sampled current value by a ratio compensation factor that is a function of the stored data representative of a ratio error rating and an average current measurement value.

30. The method of claim 27 wherein step e) further comprises causing the meter to multiply a phase shifted electricity consumption measurement value by the dynamic compensation factor.

31. The method of claim 30 wherein step e) further comprises causing the meter to multiplying the phase shifted electricity consumption measurement value by the dynamic compensation factor, the dynamic compensation factor varying with respect to an average electricity consumption measurement value.

32. The method of claim 30 wherein step e) further comprises generating a phase shift value based on the multiplication of the phase shifted electricity consumption measurement value by the dynamic compensation factor, and adding the phase shift value to the at least one electricity consumption measurement value.

33. The method of claim 30 step d) further comprises causing the meter to multiply the phase shifted electricity consumption measurement value by a phase compensation factor that is a function of the stored data representative of a phase error rating and an average current measurement value.

34. The method of claim 27 wherein step e) further comprises causing the meter to multiply either the at least one electricity consumption measurement value or the phase shifted electricity consumption measurement value by the compensation factor, the compensation factor having an inverse relationship to an average current measurement value.

35. The method of claim 27 wherein step a) further comprises obtaining at least one error rating comprising a ratio error rating a phase error rating for the external transformer.

36. The method of claim 27 wherein step d) further comprises employing the meter to obtain at least one electricity consumption measurement value, the at least one electricity consumption measurement value comprising a watt-hour value.